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SECOND UNITED NATIONS CONFERENCE ON THE LEAST DEVELOPED COUNTRIES:

Preparatory process for the Conference

UNIDO CONTRIBUTION TO THE SECOND UNITED NATIONS CONFERENCE ON THE LEAST DEVELOPED COUNTRIES: INDUSTRIAL DEVELOPMENT OF LEAST DEVELOPED COUNTRIES IN THE 1980S AND PROSPECTS FOR THE 1990S

Contribution by the United Nations Industrial
Development Organizations (UNIDO) */

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Explanatory notes

References to dollars ($) are to United States dollars, unless otherwise stated.

In tables:

A hyphen indicates that the item is not applicable.

A em dash (—) indicates that the amount is nil or negligible.

The following abbreviations are used in this paper:

GDP	gross domestic product
MVA	manufacturing value added
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme

INTRODUCTION

The necessity for a set of special measures to assist the least developed countries in bringing about a structural transformation of their economies was highlighted by the adoption, at the second session of the United Nations Conference on Trade and Development (UNCTAD), held at New Delhi in 1968, of resolution 24 (II), which specifically addressed the problems of countries with extremely poor development prospects. With reference to that resolution, the Group of 77 Ministerial Meeting held at Arusha in 1979 proposed a comprehensive programme of action that was outlined in resolution 122 (V) adopted at the fifth session of UNCTAD, held at Manila in 1979.

On the basis of General Assembly resolution 34/203 of 19 December 1979, UNCTAD convened the United Nations Conference on the Least Developed Countries, held in Paris in 1981, at which the Substantial New Programme of Action for the 1980s for the Least Developed Countries was adopted. That Programme has, in particular, the following aims: promoting the structural changes necessary to overcome the extreme economic difficulties of the least developed countries; identifying and supporting major investment opportunities and priorities; providing fully adequate and internationally acceptable minimum standards of living; and mitigating, to the extent possible, the adverse effects of man-made and natural disasters. As such, it is a long-term programme comprising domestic measures to be taken by the least developed countries themselves and supplementary international support measures aimed at fully implementing the Programme.

The UNIDO contribution to the Second United Nations Conference on the Least Developed Countries, is based on General Assembly resolution 42/177 of 11 December 1987, which, inter alia, requests all concerned organizations and bodies of the United Nations System to submit, before the first preparatory meeting, reports containing a review of the implementation of the Substantial New Programme of Action for the 1980s for the Least Developed Countries within their fields of competence and proposals for further action as inputs to the preparations for the Conference.

A further basis for its contribution lies in various mandates defined for UNIDO in resolutions GC.2/Res.9 and GC.3/Res.11 adopted by the General Conference of UNIDO at its second and third regular sessions, respectively, and decisions IDB.4/Dec.12 and IDB.5/Dec.6 taken by the Industrial Development Board at its fourth and fifth sessions respectively.

The aims of the present paper are to define the role of UNIDO as an executing agency for the Substantial New Programme of Action for the Least Developed Countries, to review overall UNIDO activities in least developed countries, and to outline an approach to industrial development issues and strategy in the least developed countries. An analysis of the industrial sector in the least developed countries during the 1980s is also presented. Moreover, in the context of preparations for the Substantial New Programme of Action II, the prospects for improved industrial performance in the 1990s are considered, and a proposed industrial action plan for the least developed countries is described.

In the annexes, special attention should be given to the specific examples of technical co-operation projects developed and implemented by UNIDO in least developed countries during the 1980s.

I. THE ROLE OF UNIDO IN THE IMPLEMENTATION OF THE SUBSTANTIAL NEW PROGRAMME OF ACTION FOR THE LEAST DEVELOPED COUNTRIES

Within the United Nations system, UNIDO has been entrusted with the role of promoting and co-ordinating international co-operation for the industrial development of developing countries, including those which have been described as least developed. UNIDO therefore takes the lead in identifying the resources and know-how needed to expand and modernize the industrial capabilities of those countries within the framework of their respective national policies. It also seeks to play a catalytic role, giving impetus and support to efforts to mobilize investible resources and know-how through governmental, financial, commercial and other entities.

To accomplish those objectives, the regular programmes of UNIDO encompass the following three basic types of activity: gathering of information resources designed for use in the formulation of national industrial policies; implementation of technical co-operation projects; and investment promotion efforts. Activities undertaken within the framework of UNIDO programmes are described below, together with examples from recent years relating specifically to the least developed countries.

A. Formulation of industrial policy

The UNIDO Industrial Policy and Perspectives Division undertakes research and studies on aspects of industrial development at the global, regional, national and industry levels. It is responsible for developing new concepts, organizing seminars, symposia and expert group meetings and preparing publications on the basis of their deliberations, maintaining a UNIDO industrial data base, reviewing expert reports and incorporating field experience in UNIDO studies. It co-operates closely with the Area Programmes Division in identifying and formulating technical co-operation programmes and projects. It thus focuses on several areas and types of function that are of direct relevance to the least developed and other developing countries, in particular the following:

(a) Global economic perspectives. Studies on global economic perspectives are prepared for industrial policy-makers in both developed and developing countries, along with analyses of the changing international industrial structure;

(b) Regional studies. Such studies focus on co-operation prospects and joint policy approaches among groups of developing countries, for example, the group of African, Caribbean and Pacific States, as well as the Arab and Latin American countries;

(c) Country-specific studies. Country studies incorporate an advisory function for the national policy-making organs of the requesting countries, and make possible the formulation and development of new technical co-operation projects that are responsive to ever-changing conditions. Some country studies, such as a study of prospects for rehabilitation of the sugar industry in Malawi, have served as forerunners of larger technical co-operation programmes;

(d) Industrial statistics. The compilation of industrial statistics and related services are aimed not only at improving the data on which technical co-operation programmes are based, but also at assisting developing countries in developing their own capabilities in the field of industrial statistics;

(e) Integrated sector programming. The methodology developed for integrated sector programming has been applied intensively in technical co-operation programmes, in the fisheries industry in western Africa, for example;

(f) Rehabilitation requirements. A survey of rehabilitation requirements in African manufacturing industry has been carried out, and industrial rehabilitation studies have been undertaken for seven countries, including the United Republic of Tanzania among the least developed countries;

(g) Industrial Development Review series. Publications in the Industrial Development Review series present, in a consolidated form, analytical surveys of the industrial sector in individual countries, with 18 of the 42 least developed countries having been included so far.

B. Technical co-operation

The UNIDO Area Programmes Division, in co-operation with the United Nations Development Programme (UNDP) and other co-operating agencies, is responsible for planning and co-ordinating programme activities in least developed and other developing countries. It co-ordinates the full programming cycle, including development of a balanced project portfolio, preparation of project designs and monitoring of programme implementation (see annex I for selected examples of UNIDO technical co-operation projects in the least developed countries).

1. Programme and project development

The process of building up a portfolio of pipeline projects has intensified in recent years, owing to the availability of increased resources, particularly through UNDP. As part of that effort, a series of programming, programme review and project formulation missions has been carried out in least developed countries in connection with the fifth UNDP programming cycle (1992-1996). UNIDO has also participated in a series of mid-term country programme reviews relating to the fourth UNDP programming cycle (1987-1991) in African and Asian least developed countries.

UNIDO programme and project development is carried out in a way that responds to the macro-economic conditions prevailing in each region of activity, as described below:

(a) In Africa, UNIDO activities have been carried out in support of the economic recovery and structural adjustment programmes initiated in recent years. Major emphasis has been placed on reinforcing the capacity for formulating industrial strategies, plans and policies, and on industrial restructuring and rehabilitation, including strengthened repair and maintenance capabilities. Other activities have included the development of agro-related industries, encouragement of entrepreneurship, industrial training, enhancement and expansion of the role of women in industrial development, technology transfer and industry-related energy development;

(b) In the Arab States, Governments are trying to adjust to the recurring uncertainties of the oil market by reducing their dependence on oil and by diversifying their economic structure. Although Arab least developed countries are not counted among the major oil producers, they are highly vulnerable, at least indirectly, to fluctuations of the international oil market, and must find alternative sources of employment and investment during times of lower or

declining oil prices. Current regional programmes emphasize technical co-operation in food development and security, development and transfer of technology, and upgrading of human resources;

(c) In the Asia and Pacific region, activities relating to least developed countries are concentrated to a large extent on Bangladesh and Nepal, although project activities are also directed toward the needs of countries as diverse as Maldives, Myanmar and various Pacific island States. For countries that have not shared in the economic progress experienced by many other Asian countries, field missions have proved very useful in exploring new concepts and in moving forward project proposals that have been submitted for consideration by Governments;

(d) In the Americas, particular attention has been given to Haiti, the only least developed country to be found in the Western Hemisphere, with programming missions adding consistently to the set of pipeline projects in a number of industries, including food products and charcoal substitutes.

2. Project implementation

UNIDO technical co-operation projects in least developed countries cover the gamut of industrial operations, including agro-based, chemical, metallurgical and engineering industries. Highest priority in the least developed countries is currently given to projects in food processing and preservation and involving research and development work on food production technology, as well as small- and medium-scale enterprises using locally available raw materials.

The industrial planning systems of many least developed countries suffer from weaknesses such as unclear objectives and strategies at the industry level, industrial policies that are inconsistent with changing needs and priorities, and insufficient co-ordination of planning and implementation between ministries and institutions. UNIDO programmes are giving increasing emphasis to industrial restructuring, decentralization of decision-making and operations, privatization and denationalization, and to the need for an adequate information basis, planning tools and decision support systems.

Technical co-operation in the field of institutional infrastructure is characterized by an increasing demand for assistance in developing an integrated approach, involving a comprehensive package of technical services. UNIDO has also provided technical co-operation aimed at establishing and strengthening the capabilities of industrial information services in the least developed countries. The UNIDO programme in quality control, standardization and metrology is an important element of its integrated programmes. Promotion of small- and medium-scale enterprises through such means as industrial subcontracting and entrepreneurship development has been another major element. UNIDO has also provided technical co-operation in establishing or strengthening institutions such as chambers of commerce and industry, federations of industry and associations of manufacturers.

Industrial management and rehabilitation has also been a major activity. Considerable attention has been devoted to the modernization of management structures and to the application of computers in management and the development of appropriate software. There have been efforts to develop a philosophy of rehabilitation at the government policy level, making appropriate use of diagnostic tools and action plans, including follow-up technical assistance at the plant level.

Industrial training includes a UNIDO fellowship programme which responds to the needs of least developed countries, in particular through tailor-made training programmes for managerial and technical personnel in industrial projects, and through group training activities and study tours. A number of regional and subregional training programmes that have been undertaken are of direct relevance to least developed countries. For instance, within the framework of the Industrial Development Decade for Africa, priority has been given to a number of training projects involving training institutions at the regional level.

Feasibility studies, including opportunity and pre-feasibility studies, have been implemented, leading to new investment projects and the rehabilitation or expansion of existing enterprises. UNIDO methodologies for industrial investment project preparation, evaluation and financing have been presented in a number of least developed and other countries.

3. Sources of funding

The number of and overall expenditure on UNIDO technical co-operation projects in developing countries has increased in recent years. The amount expended for projects in least developed countries increased from $15.2 million in 1987 to $17.0 million in 1988, and to $22.3 million in 1989 (see annex II for the distribution of technical co-operation funding by country and region). The main sources of finance for UNIDO technical co-operation activities are indicated below:

(a) In accordance with UNDP Indicative Planning Figures, UNIDO was designated executing agency for a total of 575 projects (162 ongoing and 413 new) in 1988, amounting to approximately 12 per cent of total UNDP programmed resources;

(b) The UNDP Special Industrial Services programme is used for prompt resolution of urgent and clearly identified problems through short-term interventions. The least developed countries continue to account for over one sixth of the $3 million per year allotted to that programme;

(c) UNDP has also made funding available from its Special Measures Fund for the Least Developed Countries;

(d) The UNIDO Regular Programme of Technical Co-operation includes training of personnel from least developed countries in various industrial fields, individual fellowships, group training programmes, co-operation among developing countries, consultation with Governments, and special activities for the least developed countries;

(e) The Industrial Development Decade for Africa has provided the framework for additional funding for industrial development in the 28 least developed countries on the continent of Africa;

(f) The Industrial Development Fund, which became the second largest funding source in recent years, has funded a number of noteworthy projects designed to match technological resources and capacities in developed countries with the needs of enterprises in developing countries;

(g) Trust funds and self-financing arrangements have been an excellent mechanism through which UNIDO can provide useful services to industrial enterprises, development finance institutions and development aid agencies. The

trust funds bring industrial partners in developed and developing countries together in industrial co-operation projects that are partly or wholly executed by UNIDO. Trust fund schemes are particularly suited for private sector development in cases, for example, where funds are provided by a development bank or donor agency to be channelled to the private sector in least developed countries, or where such funds are to be supplemented by local or foreign contributions from private companies.

A breakdown of UNIDO technical co-operation activities for least developed countries by source of funds (see annex III) shows that the Indicative Planning Figures continue to represent the largest source of funding. Those figures, together with two other categories of UNDP funding, namely the Special Industrial Services and the Special Measures Fund, account for nearly two thirds of UNIDO funding for technical co-operation. Funds raised by UNIDO for its Regular Programme of Technical Co-operation, the Industrial Development Fund and special programmes such as the Industrial Development Decade for Africa meet an increasing range of other identified needs, with special consideration being given to the needs of the least developed countries. Trust funds have effectively complemented UNIDO activities financed by multilateral sources such as UNDP.

Particular importance is placed on close co-operation within the United Nations system, so as to ensure that scarce resources are pooled and the merits of a multidisciplinary approach is maximized to fulfil the objectives of each programme. While continuing its role as one of the major executing agencies of projects financed by UNDP, UNIDO is also strengthening its relationship with, for example, the World Bank and regional development banks.

UNIDO thus aims to play a pioneering and catalytic role, giving impetus and support to programmes of national and international entities. In key areas of industrial development it is thus able to serve as a springboard for mobilizing flows of investible resources and know-how through governmental, financial, commercial and other entities.

C. Co-operation with the private sector

UNIDO efforts in the least developed countries include co-operation with the private sector as well as with Governments. The System of Consultations, Investment Promotion, Industrial Investment Programme and Industrial Technology Promotion activities of UNIDO are all designed to foster joint ventures between private sector institutions in the least developed countries and other countries.

The UNIDO System of Consultations serves as a forum for contacts and negotiations between developed and developing countries. It thus enables the international community to assess world-wide development trends and the problems hindering development in particular industries, and to formulate action-oriented recommendations at the national and international levels. For instance, the search for alternative technologies is one important aspect of recent consultations, and has resulted in the scaling down of some existing technologies and industrial plants, leading to the introduction of mini iron and steel, fertilizer and hydropower plants.

With regard to industrial promotion, UNIDO has assisted investors in developing countries in identifying sources of financing, technology and know-how, as well as in identifying joint venture partners. The nine UNIDO

Investment Promotion Offices in Europe, the United States of America and Japan not only help in identifying joint venture partners, but also receive representatives from the ministries of industry or investment promotion agencies of least developed countries, as well as missions that are intended to promote a given country as a place for investment. Investment promotion meetings, which can be organized upon request, serve as a forum for bilateral discussions between local promoters of a project and the potential joint venture partners.

The UNIDO Industrial Investment Programme continues to assist least developed countries in identifying sound investment projects with local sponsors and in finding foreign partners to increase the availability of financial and other resources required for their implementation. Such projects include the rehabilitation, modernization and expansion of existing facilities, as well as the establishment of new ones. The contribution of the foreign partner may include elements such as marketing expertise, plant and equipment, technical know-how and licenses, management support and training of local staff.

UNIDO activities related to industrial technology promotion are geared towards strengthening the technological capabilities of developing countries, assisting them in acquisition, adaptation and management of technologies, as well as the establishment of technology policies. The UNIDO Industrial and Technological Bank includes an Industrial Inquiries System that compiles and disseminates comprehensive information on technologies and investments to developing countries upon request. UNIDO also assists least developed countries in strengthening local technologies and in developing appropriate technologies.

D. Response to the special needs of the least developed countries

As early as June 1971, at the Special International Conference of UNIDO, it was indicated that special consideration of the industrial needs of the least developed countries should count among the means of ensuring the most purposeful use of UNIDO resources. Following up that recommendation, UNIDO convened an expert group meeting on industrial action in countries at early stages of development. UNIDO continued to play an active role in the activities and discussions that culminated in the Substantial New Programme of Action for the 1980s.

Total expenditure on UNIDO technical co-operation projects remained in the range of $14 million to $20 million per year throughout the 1980s, and registered a sharp increase at the end of the decade, as noted above. Projects financed under both the regular programme of technical co-operation and trust funds registered the highest level of implementation in 1988/89. Given the high levels of new and net approvals during 1988 and 1989, the level of project implementation is expected to increase further in 1990. In addition to technical co-operation activities at the country level, the least developed countries also participate and benefit from activities organized by UNIDO at the regional and subregional levels.

UNIDO continues to focus its efforts on increasing and attracting support from external sources of funding. For example, agreements were signed with the Governments of the Sudan and Uganda in 1988 for the implementation of technical co-operation projects financed by the World Bank. Contacts were also initiated with the International Fund for Agricultural Development for the financing of a large-scale project aimed at developing and disseminating cereal processing equipment to alleviate the work of women in rural areas of the Sahel.

Pursuant to decisions IDB.4/Dec.13 and IDB.4/Dec.14 of the Industrial Development Board on emergency assistance to the Sudan and Bangladesh respectively, the UNIDO secretariat sent a field mission to Bangladesh and the Sudan in late 1988 to assess the ways and means in which UNIDO could assist in the rehabilitation and reconstruction work required after the floods of August and September 1988.

In the case of Bangladesh, within the framework of the United Nations relief operations, UNIDO prepared a large-scale emergency rehabilitation programme for 5,500 diesel-engine-driven pump sets, which is currently being implemented. Three additional projects at various stages of development and approval relate to the use of the excess capacity of engineering workshops, to the identification of measures to minimize flood damage to small- and medium-scale enterprises and to the production of power tillers, small boats and boat engines.

UNIDO also participated in the multi-donor mission to the Sudan that was organized in October 1988 by the World Bank to assist in reviewing damage to the industrial sector and to draw up a two-year reconstruction programme. The findings of that mission were integrated into the Emergency Flood Reconstruction Programme. The areas of assistance identified within the framework of that emergency programme include rehabilitation of specific industries damaged by floods, in particular the cement and brickmaking industries.

The participation of least developed countries in such important activities as the consultation meetings and industrial investment promotion meetings has been of particular concern to UNIDO. As has been the practice, the financing of the participation of representatives from least developed countries in the four consultation meetings held during the fourth quarter of 1989 were borne out of the UNIDO regular budget. In the case of investment promotion meetings, UNIDO also covers the costs of the participation of promoters and representatives from least developed countries. That was the case for the participants from least developed countries in the 1988 Dakar Forum, in AFRICABAT* 1989, held at Dakar in January 1989, in an industrial investment promotion meeting for five English-speaking countries in West Africa, held at Freetown in May 1989, and in the Solidarity Meeting for the Industrial Development of Guinea, held in Guinea in December 1989.

Within the framework of the UNDP country programme cycle, UNIDO participates in mid-term country programme reviews. UNIDO participated in three such reviews, those for Lesotho, Malawi and Yemen, in 1989 and is to take part in several others in 1990. Those exercises are of particular importance since their purpose is to evaluate the ongoing country programmes and, if required in the light of any changing circumstances, to modify their content and direction. In the 1990-1991 biennium, UNIDO will participate in preparations for the fifth UNDP programming cycle.

An example of another important feature of the technical capabilities and flexibility of UNIDO to respond to the specific needs of least developed countries is illustrated by a sectoral review mission fielded by UNIDO to Myanmar (formerly Burma) in June 1989 at the request of UNDP. The purpose of the exercise was to review United Nations-financed programmes in the light of the government reassessment of the economic policies of the country. As industry

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*Salon industriel des professions des bâtiments de l'aménagement des territoires et des travaux publics d'Afrique.

was identified as one of the key sectors, UNIDO was called upon to review the current structure and trends of industrial development and current or envisaged industrial policies in the country. In that particular case, the industrial review will also be used as a major input to the forthcoming country programme review in Myanmar.

For UNIDO assistance to the least developed countries in Africa, a document prepared by UNIDO in 1989 on industrial development in the African least developed countries contains proposals for priority activities by Governments, the international community and UNIDO for the implementation of the Industrial Development Decade for Africa. It was presented at the meeting of the Intergovernmental Committee of Experts of the Whole on Industrialization in Africa and at the ninth meeting of the Conference of Ministers of Industry in 1989. Both the Committee of Experts and the Conference of Ministers requested UNIDO to intensify its assistance to the industrialization of the African least developed countries, and invited donor countries to increase their financial and technical co-operation with those countries.

E. Related areas of UNIDO concern

The following UNIDO activities relating to least developed countries are among its most important:

(a) Industrial Development Decade for Africa. The programme of the Industrial Development Decade for Africa serves as the focal point in UNIDO for co-ordination, follow-up and monitoring of all UNIDO projects and activities related to the Decade. The programme is designed to promote, formulate, and follow up the implementation of activities relating to the Decade, in co-ordination with African countries, regional and subregional organizations, United Nations agencies and other international organizations, in particular the Economic Commission for Africa and the Organization of African Unity. It also has the following aims: assisting in the preparation and promotion of investment projects in Africa; mobilizing technical assistance and investment funds for the implementation of the activities of the Decade; initiating, co-ordinating and following up UNIDO participation and its contribution to meetings of intergovernmental bodies and other organizations related to the Decade; and preparing policy documents and progress reports related to the Decade for submission to policy-making organs;

(b) Special Programme for the Industrial Development of Asia and the Pacific. A Special Programme has been established to promote rapid industrial growth of the developing countries of the Asia and Pacific region, with special emphasis on the least developed countries. That Programme, which benefits the 13 least developed countries in the region (Afghanistan, Bangladesh, Bhutan, Democratic Yemen, Kiribati, Lao People's Democratic Republic, Maldives, Myanmar, Nepal, Samoa, Tuvalu, Vanuatu and Yemen Arab Republic), aims at facilitating the development of appropriate indigenous technologies wherever possible, and at assisting, where necessary, in arrangements for the transfer of technologies for the development of industries in the region. The Third General Conference of UNIDO, at its ninth plenary meeting, decided to establish a special account within the Industrial Development Fund for those purposes and for the financing of technical co-operation projects and programmes for the industrial development of the least developed countries of the region;

(c) Industrial co-operation among developing countries. In addition to the special attention given to regional co-operation in Africa and other regions, many activities related to economic and technical co-operation among

developing countries on an interregional basis have been implemented, often as a direct result of workshops and solidarity meetings organized to encourage such exchanges;

(d) Integration of women in industrial development. An increasing number of technical co-operation projects are designed to promote the integration of women in industrial development. Special attention has been given to the problems involved in the development and dissemination of appropriate food-processing technologies for rural women. New approaches have been developed that should lead to a more systematic consideration of women in technical co-operation and research activities, in particular in the least developed countries;

(e) Co-operation with industrial enterprises. Efforts have been made to bring about increased interaction and co-operation between enterprises in developed and developing countries, for the benefit of the latter, in areas such as the introduction and transfer of technology, marketing, financing and management techniques. Co-operation with the industrial sector has been greatly enhanced by third-party trust fund and other arrangements to organize joint studies, missions and promotional workshops for participants from developing countries as a whole, and from least developed countries in particular;

(f) Co-operation with non-governmental organizations. About 80 international non-governmental organizations currently have consultative status with UNIDO, thus enabling it to draw upon their experience for advice on substantive matters, training opportunities and the identification of experts. Close contact has also been maintained with national non-governmental organizations that can provide UNIDO with low-cost expertise. Relations with such organizations have been particularly useful in the promotion of industrial co-operatives and of co-operation among developing countries in small- and medium-scale enterprises.

II. INDUSTRIAL PERFORMANCE OF THE LEAST DEVELOPED COUNTRIES IN THE 1980s

A. Review of industrialization trends

Although a few least developed countries could report encouraging growth rates in per capita gross domestic product (GDP) since the adoption of the Substantial New Programme of Action in 1981, the situation in general has deteriorated both from the economic and the social point of view. The implementation of the Programme has been very slow, and only five of the 42 least developed countries reached the general programme target of a 9 per cent growth per annum in manufacturing value added (MVA). The factors responsible for that situation are well known, and include both external and internal constraints, such as poor policy choices, inadequate aid flows, weak infrastructure, dearth of human resources, natural and man-made disasters, depressed commodity prices, heavy debt burden and small size of domestic markets.

In the 1990s, it appears that industry in the least developed countries might face a problem of survival rather than development, given the present macro-economic environment in most of those countries. As the manufacturing sector has remained very small in most least developed countries, it is not possible to rely on that sector by itself to transform their economies, at least not in the short run. Nevertheless, in all least developed countries the manufacturing sector has an important role to play in providing consumer goods and inputs to agriculture, in processing its outputs, and in creating job opportunities, thereby linking the unemployment problems faced by many least developed countries with questions relating to the promotion of the private sector and the creation and development of small- and medium-scale industries.

In many African least developed countries, MVA declined not only in per capita terms but overall. Between 1981 and 1986, Chad, Sierra Leone, Somalia, Sudan, Togo, Uganda and the United Republic of Tanzania each experienced negative MVA growth rates. Apart from Lesotho, Mali and Burundi, the average MVA growth rate in the other African least developed countries was less than 5 per cent. In Haiti, the only Latin American least developed country, conditions were no better.

In the Asian least developed countries, however, the situation was somewhat better, with Myanmar and many of the smaller countries (Bhutan, Maldives and Nepal) experiencing MVA growth rates of over 5 per cent between 1981 and 1986, although in Bangladesh, which has the largest manufacturing sector not merely among Asian but among all least developed countries, the MVA growth rate averaged only 1.3 per cent. Among the Arab least developed countries in Africa and Asia, Democratic Yemen had a negative MVA growth rate, while the Yemen Arab Republic had a positive one between 1981 and 1986.

Taking population growth into account, 16 least developed countries experienced negative growth rates in MVA per capita during the first half of the 1980s. In many African least developed countries, MVA also declined in overall terms, while in the Asian least developed countries the situation was slightly better, with four countries recording MVA growth rates of about 5 per cent between 1981 and 1986. In many least developed countries it would therefore be more accurate to refer to de-industrialization rather than industrialization during the 1980s.

The manufacturing sector of least developed countries still predominantly consists of consumer goods industries, with little capacity for the production of intermediate and capital goods. The lack of linkages between industry and

the other sectors of the economy has resulted in a heavy dependence of those countries on imported inputs and has hindered the accomplishment of any durable structural changes.

Among the factors that were considered as a prerequisite for the successful implementation of the Substantial New Programme of Action was a significant increase in financial resources. However, the low domestic savings ratio (in 1987, the average domestic savings rate in sub-Saharan Africa was estimated at 4.9 per cent of GDP) did not permit productive investments in the manufacturing sector. In addition, the direct flows of official development assistance to industries in least developed countries have been relatively small. A UNIDO study concluded that 40 per cent of the external financial flows to the industrial sector came in the form of export credits, about 30 per cent from private bank lending and an average of between 5 to 10 per cent from non-concessional loans from multilateral development finance institutions, the latter registering a sharp drop compared to the situation in 1980. Moreover, the tendency has been to concentrate on "safe markets", with the consequence that many least developed countries were excluded.

As for policy constraints in the industrial sector, the least developed countries as a whole have suffered severely from import strangulation owing to lack of foreign exchange, over-valued exchange rates and increasing debt burdens. That has been aggravated by indiscriminate pursuit of inefficient import substitution strategies, involving the shielding of domestic production by high protective barriers and frequently using inappropriate technologies. Extensive reliance on capital-intensive technologies, ill-adapted to domestic skill levels, has in many instances discriminated against simpler labour-intensive technologies.

External dependence by industry on intermediate and capital goods is reflected in the very high share of such goods in imports. Industry in the United Republic of Tanzania provides a highly illustrative case in point. In 1984, the manufacturing sector in that country generated $56 million in value added, but consumed recurrent inputs valued at $420 million, 70 per cent of which were sourced by imports.

Except for food processing, the modern manufacturing sector in least developed countries tends to be highly import-intensive. Evidence from a UNIDO survey of industries in the African region reveals that in the brewing industry, for instance, virtually all raw materials except water are imported. The same applies to practically all other branches of light and intermediate industries such as soft-drink bottling, footwear, leather, apparel and metals. Of the 100 manufactured products produced by the 40 African countries covered in the survey, roughly 55 per cent of the product sample had an import content of close to 100 per cent. Only in agro-industries and textiles was the import content under 25 per cent.

One consequence of the heavy dependence on imported inputs is a lack of linkages between the industrial sector and the rest of the economy. Once the least developed countries start to experience severe balance-of-payment deficits, as they did throughout the 1980s when commodity prices were low, foreign exchange to obtain the inputs is simply not available, and hence there is a reduction in capacity utilization if not outright closure.

Energy and mineral resources complement agriculture as sources of raw materials for industry. Three major UNIDO projects in recent years - diamonds in Botswana, natural gas in Bangladesh and iron ore in Mauritania - have had a

mixed impact. In Bangladesh, locally available natural gas has been successfully used as a raw material base for the rapidly growing fertilizer industry to meet increasing domestic demand and leading to considerable savings in imports. The case of Botswana may also be seen as a success, with its economy enjoying one of the fastest growth rates in the world, but even here the linkages with manufacturing have not been very effective. In Mauritania, iron ore production, the engine of growth, stagnated in the 1980s owing to the decline in both demand and prices. Production and export estimates for the period under review turned out to be 70 per cent of what had been forecast, while real prices fell 15 per cent below those forecast.

Unfavourable trends in cash crop production also give cause for concern in terms of the contribution to manufacturing growth. In a number of least developed countries there has been a considerable decline in export earnings. Apart from cotton, there was a decline in production of all the other cash crops, coffee output by 23.7 per cent, cocoa by 15.4 per cent, and ground-nut products by 23.3 per cent. Those unfavourable trends will prove difficult to reverse in the near future, since they result from a complex set of deep-seated problems, including inadequate production from aging plantations, the delayed impact of agricultural rehabilitation programmes, and the deliberate policy of some least developed countries, for example, the Central African Republic, to reduce the production of those crops that fetch low prices on the world market. A similar situation would seem to apply to the jute industry in Bangladesh.

For the majority of African least developed countries, the absolute value of net agricultural output declined in real terms by 1.7 per cent per annum, or by -4.6 per cent in per capita terms between 1981 and 1985. In 1986 the performance of the agricultural sector improved markedly to show an MVA increase of 3.2 per cent per capita. However, the exceptionally high growth rate can be attributed primarily to the improvement in weather conditions, notably the return of normal rainfall, rather than the impact of policy reforms.

B. Strategies for promoting industrialization

The growing recognition of the seriousness of the industrial development problems of the least developed countries has prompted experimentation with and adoption of a wide range of basic economic strategies. The gamut of strategies that have been applied in the 1980s include those based on some combination of import substitution, export promotion and self-reliance. Other major emphases have been on increasing investible revenues, enhancing the role of the private sector, and structural adjustment. The experience of each of these approaches has been mixed, as is illustrated below.

1. Selective import-substitution strategies

Although the indiscriminate pursuit of import substitution strategies has been a major cause of industrial failures among least developed countries, an extreme reaction against import substitution would be equally counter-productive. In the face of falling export revenue and limited credit, some import substitution may be inevitable. There is a need to devise a selective import substitution strategy that concentrates on a relatively small number of potentially profitable branches and enterprises. Aid projects and programmes, which have been increasingly commercialized in recent years, could provide a framework for making some progress in selective import substitution.

2. Export-oriented approaches

The outlook for export market demand is more favourable given the spate of devaluations in the mid-1980s, which halted the tendency of currencies of least developed countries to serious over-valuation and marked a return to more realistic parities. However, there are major constraints which diminish the growth prospects for manufactured exports. First, the slow-down in the engine of economic growth as represented by the growth rate of the industrial market economies has had a very strong impact on the manufactured exports of developing countries. Secondly, studies that have been made of the income elasticity of demand by industrial countries for manufactured products from developing countries have invariably found it to be very high, much higher than unity and certainly higher than for food and primary commodities from developing countries where income elasticity may be quite low.

Even if growth accelerated in developed market economies, and trade liberalization measures, for example, through the Uruguay Round, were achieved, the relative and absolute size of manufactured exports from least developed countries is extremely small. Arithmetically, that makes its growth potential greater, but its real economic impact would be limited. All those factors are likely to continue to exacerbate the problem of small markets. Furthermore, unfavourable trends in the terms of trade for primary products would seriously reduce the purchasing power of rural populations.

In general, the scope for developing an export-oriented industrialization strategy for most least developed countries appears somewhat limited. However, expansion of export capacity has played an increasing role in recent policy packages, not least in the World Bank and International Monetary Fund structural adjustment loans. Export processing zones have been created in several least developed countries, for example in Bangladesh, export licensing has been liberalized in Nepal, and an Export Development Council created in the Sudan. Some success has been achieved by linking export initiatives to subcontracting activities, such as the growth of the textiles industry. The prospects for further progress with that strategy, particularly given the adverse trends in the terms of trade for commodities, are not promising.

3. Self-reliant development strategies

A conception of development that focuses on endogenous development based primarily on a self-reliant integrated approach concentrated on rural commodities, agriculture and food self-sufficiency has been chosen by many least developed countries. Such a strategy includes an industrial component that would accompany rural development instead of trying to precede it. It introduces a new role and dimension for industrialization based on local needs and resources, on domestic or regional markets, and on self-sufficiency rather than on exports.

Self-reliant industrialization will help significantly to increase production of goods and services meeting essential requirements, to increase employment and ensure a broader income distribution, to multiply intersectoral links furthering self-reliance, to develop local sources of saving to replace as far as possible external financing, and to develop human resources (manpower, management, training, research and innovation, technological adaption, spirit of enterprise etc.) as a means towards progressive mastery of modern technology.

The slow pace of agricultural development and the lack of customers for manufactured products among the rural population are major factors blocking self-reliant industrialization in the least developed countries. Priority must therefore be given to increasing rural productivity so as to obtain a larger surplus, and to ensuring that the rural population receives a larger share of that surplus, which will result in greater purchasing power to be used on agricultural inputs and consumer goods manufactured in the country.

4. Increased investible resources to the industrial sector

If the prospects for manufacturing are to improve, action needs to be taken to reverse the trend of declining investible resources. There are positive indicators that domestic resource mobilization can be improved. For example, the experience of the Grameen Bank in Bangladesh is evidence that the rural poor can, and do, save. Some least developed countries have actually introduced measures to curb capital flight and to improve taxation systems. The Government of Botswana has gone further. It provides grants for the establishment of industry, particularly in rural areas. However, in most least developed countries investment is in urgent need of revival, and in the immediate and long-term future, international resource flows must be increased to supplement domestic savings.

Measures have been taken to improve efficiency in the public sector and to cut budget deficits. By dint of recruitment freezes, stringent selection procedures, cuts in pay or redeployment measures, some Governments have managed to reduce the public sector wage bill. Many countries have overcome considerable misgivings to set in train the process of reducing subsidies on staple food items and agricultural inputs. The reform of public sector firms has also permitted significant reductions in deficit subsidies. Several countries have thus succeeded within the space of two or three years in cutting overall public sector deficits by half, to under 5 per cent of GDP.

The commitments made in the Substantial New Programme of Action on increasing official financial flows and on improving aid modalities still remain to be fulfilled. Given the limited assistance directly allocated to the industrial sector (from 2 to 3 per cent for the Development Assistance Committee of the Organisation for Economic Co-operation and Development and 5 per cent for the Organization of Petroleum Exporting Countries), there may be a case for both development partners making greater efforts to switch a higher proportion of their assistance to industry. Consideration should be given to creating more special windows in multilateral and bilateral financial institutions to allocate funds to industry.

Given the emphasis placed on small-scale endogenous industry, sector loans to financial intermediaries in least developed countries would seem the most appropriate means for channelling such external loans to industry in the least developed countries. Access to risk capital for local businessmen needs to be improved. Efforts have to be made to develop and strengthen existing institutions, as they have a crucial role to play.

A major impediment to investment in least developed countries has been inadequate insurance coverage, as the scope of the national systems and the private sector has been limited. Attempts have been made to establish a multilateral system that would provide much broader coverage of investments against risks, including the Multilateral Investment Guarantee Agency of the World Bank and the Guaranteed Recovery of Investment Principal of the International Finance Corporation.

5. Upgrading industrial capabilities in the private sector

Increasing importance is being attached to the role of the private sector in industrial development, with due recognition of the human element, in terms of skill, motivation and innovation. Experience has, however, shown that care needs to be taken whenever a political decision is made to privatize. Without co-ordination, there is the danger that least developed countries will end up competing against each other for a relatively small amount of foreign private investment and foreign assistance for public enterprise. Although Governments of least developed countries adopting privatization policies have been turning to domestic business circles with their proposals, it has become apparent that the capital outlays required for the take-over of public enterprises often exceeds available domestic resources, and hence calls for foreign investors. Even that alternative encounters serious limitations in the case of least developed countries, as their ability to attract foreign investment is impeded by small domestic markets, lack of skilled labour, and inadequate infrastructure. Given the great number of public enterprises in need of rehabilitation, Governments must decide how much, if any, of the manufacturing sector should be allowed to remain in foreign hands, and on which discounts they are prepared to sell the enterprises built up with substantial capital outlays. Some least developed countries (Togo, for example) have found it necessary to make very large concessions in order to induce private buyers to take on weakening assets, thus increasing the risk that the immediate, once-and-for-all benefits to the national budget may be outweighed by the longer-term effects on the economy as a whole. In addition, for a number of least developed countries with a heavily subsidized public enterprise sector, privatization through foreign investment is not a viable option, as no investor is likely to buy loss-making enterprises whose long-term profit prospects are doubtful without enormous local subsidies and long-term concessions.

6. Structural adjustment

In several least developed countries, structural adjustment programmes are being implemented to rehabilitate a devastated industrial sector. The reforms usually embrace expanding the role of the private sector, improving the performance of those enterprises that remain in the public sector, liberalizing the import régime, and adopting a flexible exchange rate policy and incentives to promote exports. The government of Bangladesh undertook one of the more thorough structural adjustment programmes, with its Revised Industrial Policy of 1986. While the process may have gone further in Bangladesh than in many other least developed countries, several other countries (Somalia, Togo and Uganda, for example) have embarked on similar programmes.

Regional co-ordination of national privatization strategies could serve to increase the attractiveness of potentially viable enterprises to foreign investors, since it could serve as a mechanism for widening the market and eliminating production duplication. Regionally based public firms, created out of the amalgamation of national public enterprises, would enjoy similar advantages. An effective privatization programme in the least developed countries would require not just the reorganization of national ministries, development financing corporations, and parastatals, but the creation of a regional institutional network for policy co-ordination and the establishment and support of regional privatization and regional public sector reorganization programmes.

III. PROSPECTS FOR IMPROVED INDUSTRIAL PERFORMANCE IN THE 1990s

A. Prospective strategies for the industrial sector

During the 1990s, the prospects for industrialization in least developed countries should not depend on one single strategy common to all of them, but rather should be determined by a diversity of alternatives and possible approaches reflecting the situations of the countries concerned. In order to ensure more positive steps toward the achievement of the objectives of the Substantial New Programme of Action, UNIDO is preparing an action plan in the field of industry, a plan oriented toward the medium- and long-term structural improvement of the economies of least developed countries. Key elements for a successful regeneration of industry would include analysis of industrial potential and reassessment of industrial development priorities, special incentives for industries strengthening domestic linkages, improved management capabilities and vocational training etc.

With debt service problems and declining commodity prices leading to import strangulation in the least developed countries, the macro-economic environment is hardly conducive to industrial development. Industry in the least developed countries faces not a problem of development but of survival. In the 1990s, one major objective should be to arrest the decline in the manufacturing sector and to achieve a positive growth rate in MVA throughout the decade. Failure to achieve that minimalist target would imply de-industrialization and stagnation, a continuation of the acknowledged failures of the 1980s.

The industrial sector, which has remained small in most least developed countries, cannot be the main driving force, by itself, for transforming the economies of the least developed countries in the short run. Even high rates of growth in MVA will initially add a small amount to GDP. Only when the least developed countries become involved in the manufacture of intermediate and capital goods, as a few least developed countries have so far started to do, will structural transformation be accomplished. In all least developed countries, however, manufacturing will have an important role to play, not only in the production of consumer goods, but also in providing inputs to and processing the output of agriculture and other primary sector activities. Moreover, it can help to provide jobs in least developed countries characterized by rapid population growth and increasing urbanization. In Bangladesh, which has the largest industrial base among the least developed countries, the rapid growth of the industrial sector is essential to continue to provide adequate future employment opportunities. Even in countries like Haiti and Lesotho, where there are few linkages between the industrial sector and the rest of the economy, the manufacturing sector can at least contribute significantly to reducing unemployment rates.

However, if any significant shift in the growth prospects of manufacturing in least developed countries is to be achieved in the 1990s, much of the burden of responsibility lies with the international community to agree to urgently needed measures as part of a revised Substantial New Programme of Action. That approach was adopted in the 1981 Programme in order to lay the groundwork for its effective implementation, and to ensure that medium- and longer-term development was not prejudiced. The situation of the manufacturing sector at the end of the 1980s, characterized by import strangulation, widespread capacity under-utilization, and other destructive trends call for an immediate action component, similar to that agreed upon in the 1981 Programme, to bring about a significant improvement in its prospects.

B. Priorities for immediate action

At the industrial level an immediate action component would include the following types of measures:

(a) Provision of assistance for overcoming critical bottle-necks in management, maintenance, repair and physical facilities in order to obtain better use of existing infrastructure and industrial plants;

(b) Immediate provision of additional financial support for the identification of industrial projects, undertaking of feasibility studies and detailed preparation of investment projects as well as projects relating to the industrial strategy;

(c) Substantially enhanced supply of inputs necessary for rural development, agricultural implements, fertilizers etc., in order to increase production and productivity in food processing;

(d) Financial support for job-creating activities at community levels, including support for local small-scale, labour-intensive rural industrial projects and for non-governmental organizations involved in industrial development.

The key elements needed not only for rehabilitating existing enterprises but also for regenerating industry in the least developed countries would include the following elements, some of which may already be found in the present industrial policies of many least developed countries:

(a) Reassessment of industrial development priorities in the light of the medium-term overall outlook (which may entail closure of plants);

(b) Special incentives for industries that strengthen domestic linkages (current regulations often favour import-dependent industries);

(c) Identification of new ways of supplying import-dependent industries with essential inputs and spare parts;

(d) More attention to the development of medium- and small-scale industry (that is, movement away from large-scale, capital-intensive manufacturing in most cases);

(e) Infrastructural improvement, including the institutional infrastructure;

(f) Better vocational and high-level (technical, managerial) training, within the context of overall educational improvements;

(g) Stimulation of agriculture and meshing of industrial and agricultural projects where possible;

(h) Greater flexibility in or abolition of price regulations;

(i) Simplified administrative procedures, including price controls;

(j) Decentralization of economic decision-making within public sector industries;

(k) Encouragement of private entrepreneurship and industries;

(l) Involvement of private sector representatives in the policy-making process;

(m) Reduction of regional trade barriers;

(n) Rehabilitation of enterprises that have viable, long-term prospects even under the present, relatively unfavourable conditions.

Industrialization in the least developed countries should no longer be viewed in isolation, but as being integrated within a process of comprehensive development in which the rural population and agriculture provide the motive force. Within that new strategy, progress towards industrialization would warrant special attention to the supply of agricultural inputs and processed products adapted to the needs and tastes of the urban consumer as well as the basic requirements of the rural population. The improved producer prices paid to farmers, however, have meant a growing purchasing power for the rural citizens - the majority of the population - and have had a stimulating effect on demand for consumer goods as well as for agricultural implements and some intermediate goods needed in the countryside. Those factors have particularly benefited small-scale industries located in rural areas whose production is based on domestic inputs and geared to rural markets.

Commitment to a self-reliant strategy would necessitate incorporation of appropriate industrial objectives and instruments in a revised Substantial New Programme of Action for the 1990s. There is a danger that the strategy could result in a delinking process between manufacturing units in least developed countries and their industrial market partners. Although there is a new recognition by both development partners of the need to encourage private investment, the question must be raised whether firms of developed economies would become involved in a strategy of self-reliance, given the narrow profit margins for satisfying low-income rural markets, and the gulf in technology and marketing that would exist, at least in the short term until adaptations were made. Furthermore, evidence for some countries shows that domestic demand has already been of overwhelming importance as a source of growth for manufacturing output, and the dismal performance of the sector must raise doubts whether further reliance on domestic markets would lead to any significant growth in the near future.

A key feature in pursuing industrialization through encouraging entrepreneurial development and private investment is that priorities for industry are determined primarily by the private sector. However, in influencing the priorities of the public sector and in co-operating with the private sector, certain issues may be specified, in particular the following:

<u>At the national level</u>

(a) As a matter of policy, least developed countries should give high priority to industrial development as a powerful engine of overall growth and as a necessary component in the resolution of a wide range of pressing problems, such as that of food security;

(b) In the industrial planning process, least developed countries should concern themselves with certain crucial areas, including agro-industries, small-scale industries, entrepreneurship development, investment promotion and training;

(c) least developed countries should aim at moving their production capabilities gradually from consumer goods to intermediate and capital goods industries;

(d) In conjunction with the development of the industrial sector, least developed countries should concentrate on the development of the agricultural sector, as both complement each other in the pursuit of self-sustaining growth;

(e) In planning and designing industrial projects, before industries are established, least developed countries should ensure the establishment of inter-industry linkages and the availability of raw materials and other inputs and markets;

(f) Least developed countries, particularly those solely dependent on domestic markets, should examine the possibilities for developing export-oriented industries, particularly those that might fill existing or potential market niches;

(g) Least developed countries need to give the highest consideration to more efficient management of industrial plants at all levels. This can be achieved by developing human resources, particularly managerial, engineering and other technical skills;

(h) Least developed countries should develop institutional arrangements, including the adoption of greater incentives, to improve the efficiency of the public sector;

At the international level

(i) To achieve the expected results, and as a prerequisite for increased private funding, the flow of official development assistance and concessional loans to industry should be substantially increased to meet the growing requirements of the adjustment programmes of least developed countries;

(j) Increased transfer of technology should be facilitated by providing the necessary expertise, training, credit and loan facilities to least developed countries;

(k) Developed countries should give preferential treatment to exports of manufactured goods from least developed countries by opening their markets to those countries and refraining from protectionist policies;

(l) Least developed countries should be encouraged to process their raw materials, to use their installed capacities more economically, and to acquire assistance in training and management through subcontracting arrangements.

IV. INDUSTRIAL ACTION PLAN FOR THE LEAST DEVELOPED COUNTRIES

A. General approach

The crucial importance of the manufacturing sector to the development of the least developed countries is reflected in the present paper. Resolution IDB.5/Dec.6 of the Industrial Development Board called on UNIDO to participate fully in the preparations for the United Nations Conference on the Least Developed Countries. The Third General Conference of UNIDO endorsed such a role for UNIDO, and, in its resolution GC.3/Res.11, called for the development of a special strategy for the industrialization of the least developed countries in the 1990s.

UNIDO continues to regard the main objectives of the original Substantial New Programme of Action as valid, although adjustments must be made for the policies, needs and endowments of individual countries. However, since the manufacturing sector in most least developed countries in the 1980s has not even come close to achieving the originally targeted rate of growth, UNIDO recognizes the need for more precise and effective instruments to bring about a growth rate that approaches or meets the stated objectives.

UNIDO has therefore undertaken the preparation of a more detailed and comprehensive industrial plan of action for the least developed countries in the 1990s. The project involves conducting a set of studies and fact-finding missions to address the following four key industrial development issues: human resources development; improvement of industrial capabilities; industrial rural development and promotion of locally based industry; and international support for industrialization in the least developed countries. Within the framework of the project, an international workshop will be organized to discuss the studies undertaken. In the light of the studies, the fact-finding missions and the recommendations of the Substantial New Programme of Action II, recommendations for action at the national and international levels will be drawn up.

B. Components of the proposed industrial action plan

The studies undertaken to provide a basis for an industrial action plan for least developed countries, the suggestions and comments of the proposed workshop and the recommendations of the Second United Nations Conference on the Least Developed Countries would help UNIDO to focus on specific obstacles to industrialization and the means by which those obstacles could be overcome. Those means could involve action by industrial enterprises, Governments of least developed countries, other developing and developed countries and non-governmental and intergovernmental organizations, especially UNIDO. The action would be analysed and translated into a series of precise and coherent recommendations for inclusion in the industrial action plan. As far as possible, the components of the plan will be categorized according to the main actors, the problem areas addressed, the timing and the resource requirements, with detailed consideration being given to specific sectoral problems. The plan will be submitted to the Fourth General Conference of UNIDO in 1991.

In general, the components of the action plan will be classified on the basis of the following factors: the timing of implementation (short-, medium- and long-term); the actors involved (developed, least developed and other developing countries); the relevant institutional structures (international, subregional or non-governmental organizations, Governments, private institutions); the type of activity (legislation, administration, promotion, institutional development, investment, human resource development, technical

assistance, transfer of technology etc.); the specific industries concerned; the major linkages; and the resource requirements (internal, external), including their type and magnitude.

A further important criterion for the classification of the plan components will be the subgroupings of least developed countries. The heterogeneity of the least developed countries in terms of size, geographical location, economic structure, natural resource endowments etc. reflect their vastly different capacities for industrialization. Accordingly, the plan components will distinguish between least developed countries on the basis of those and other factors such as opportunities for regional and subregional co-operation, size and content of the manufacturing sector, existing and potential linkages with other sectors and the degree of openness of the economy. Those factors will be considered, among others, in the grouping of the least developed countries, and such an approach will be reflected in the terms of reference of the individual studies.

In the grouping of least developed countries, special attention will be paid to work carried out by the Programme Development Support Unit on methodologies for the preparation of country typologies as a basis for technical co-operation programmes. Consideration will also be given to the relevant findings of its studies on integrated sectoral programmes for fisheries, agro-related industries, fertilizers and agricultural machinery in least developed countries.

Annex I

SELECTED UNIDO TECHNICAL CO-OPERATION PROJECTS IN LEAST DEVELOPED COUNTRIES

A. Food products (ISIC 311 and 312)*

Food processing is the largest single manufacturing industry in developing countries, accounting for over 16 per cent of manufacturing industry. Output of processed food is also growing relatively rapidly, at a rate of over 4 per cent per annum since 1970, a rate that it will have to sustain or increase in order to feed its fast-growing urban population, to reduce food imports and to carry out food security measures.

The food products industry has received nearly 6 per cent of the total volume of UNIDO industry-specific technical co-operation. UNIDO has supported an integrated approach to the promotion and development of agro-industries (for example, in Niger and Vanuatu), as well as the rehabilitation of existing industries (Guinea and Uganda).

Table 1. Selected UNIDO technical co-operation projects: food products industry

Country or region	Period	Project title
Bangladesh	1985-	Rice-bran oil extraction plant
Democratic Yemen	1985-	Improvement of bread production and distribution
Ethiopia	1985-	Assistance in establishment of the national utilization scheme for slaughter house by-products
Ethiopia	1986-	Feasibility study of a baby-food manufacturing complex
Guinea	1982-	Assistance à la preparation d'un programme pour la réhabilitation, la modernisation et l'expansion de l'agro-industrie
Guinea-Bissau	1987	Assistance in performance improvement of fish-processing plants
Mali	1982-	Assistance à la Société des conserves alimentaires du Mali
Niger	1985-1986	Development of agro-industry for essential industrialization

continued

*International Standard Industrial Classification of all Economic Activities.

Table 1 (continued)

Country or region	Period	Project title
Uganda	1981-	Rehabilitation of Mukisa Foods Limited
United Republic of Tanzania	1986-	Preparatory assistance in the field of food testing and quality control in food-processing industry
Vanuatu	1986	Assistance in the development of the food-processing industry
Yemen	1979-	Establishment of food testing and quality control laboratory

B. Textiles (ISIC 321) and wearing apparel (ISIC 322)

The textile industry contributes nearly 10 per cent of the total manufacturing output of developing countries. Textile industry output increased by about 2.4 per cent per annum between 1970 and 1985, and increased by an even higher rate in recent years (for example, 4.8 per cent per annum in 1988). That resulted in an increase in the output of the textile industries of developing countries, which now account for about 25 per cent of world output. The clothing industry contributed another 3.5 per cent to manufacturing output in developing countries, and has been increasing at a rate of 4 per cent per annum. The share of developing countries in world output has risen to about 16 per cent.

UNIDO implemented many large-scale technical co-operation projects in the textile industry, accounting for about 6 per cent of UNIDO expenditures in developing countries. Particular attention has been given to value-added processes involving local products such as jute (Bangladesh) and sisal (United Republic of Tanzania), and to rehabilitation of the garment industry in countries such as Lesotho, Mozambique and Vanuatu.

Table 2. Selected UNIDO technical co-operation projects: textiles industry

Country or region	Period	Project title
Bangladesh	1985-1986	Jute products research
Bangladesh	1982-	Strengthening of the College of Textile Technology
Bangladesh	1984-	Private textile mills - production management system
Bangladesh	1984-	Promotion of hand-knotted woollen carpet industry

continued

Table 2 (continued)

Country or region	Period	Project title
Botswana	1987-	Establishment of a knitwear factory
Democratic Yemen	1986-	Assistance in marketing of cotton cloth
Kiribati	1989	Assistance to the garments factory
Lesotho	1985-	Assistance to Peacock Garment Company Ltd. in improving its production techniques
Mozambique	1986-	Assistance to OMM garment co-operatives in production organization and financial management
United Republic of Tanzania	1984-	Assistance to Kurasini Women's Tailoring Society
Vanuatu	1986	Improvement of garment designing and manufacturing activity
Yemen	1989-	Techno-managerial appraisal of the Yemen Weaving and Textile Corporation

C. Wood and wood products (ISIC 331) and paper and paper products (ISIC 341)

Wood and wood products account for only about 2.3 per cent of manufacturing output in developing countries, although the annual increase in output was much faster in developing countries (nearly 4 per cent per year). UNIDO technical co-operation encourages efficient use of wood resources, as well as the substitution of local wood resources for imported steel and other products in the building industry. UNIDO designs for prefabricated modular bridges that were developed in Kenya have been introduced into the Central African Republic and other countries. UNIDO co-operated with Bhutan to preserve wood for the construction industry. UNIDO training programmes are concentrated on criteria for the selection of woodworking machines and production management in wood-processing industries.

The paper and paperboard industry makes a growing contribution to total manufacturing output as income levels rise. Between 1970 and 1985, value added in that industry increased twice as fast as in developed countries, resulting in an increase in the share of developing countries in world output from 7 per cent in 1970 to over 10 per cent in recent years. UNIDO seeks to assist developing countries in the use of local raw material other than wood (bagasse, bamboo), in selecting the pulping process most suitable for those raw materials and in rehabilitating or modernizing existing pulp and paper works. UNIDO assistance has strengthened national centres for pulp and paper research in Myanmar and the Sudan.

Table 3. Selected UNIDO technical co-operation projects: wood and paper products

Country or region	Period	Project title
Bhutan	1984-	Low-cost modular prefabricated wooden bridges
Cape Verde	1986-	Assistance for quality control of imported wood
Myanmar	1977-	Establishment of a pilot plant for pulp and paper research and training on tropical raw materials at the Central Research Organization
Sudan	1982-1986	Cellulose Chemistry and Technology Research Centre
Togo	1986-	Techno-economic feasibility study for a wood-based panel plant
Uganda	1981-1986	Assistance in pulp and paper production - Pulp and Paper Company
Asia and Pacific	1981-1986	Regional coconut wood training programme
Caribbean	1986-	Development of integrated industry programme for the woodworking and furniture industries
Global	1979-1986	Pilot plant for long/short fibre separation in bamboo pulp (Ashok Paper Mills Ltd. India)

D. Non-metal mineral products (ISIC 361, 362, 369)

About 5 per cent of total manufacturing value added in developing countries is accounted for by pottery, china and earthenware (0.5 per cent), glass and glass products (0.9 per cent) and building materials such as bricks, tiles, pipes, cement, lime and plaster. In the 1970s and 1980s output of those products in developing countries increased at more than double the rate in developed countries. As a result, the share of developing countries in world output of those products increased from about 10 to nearly 15 per cent.

UNIDO co-operates with several least developed countries (for example, Democratic Yemen) in evaluating their clay and other raw material resources and developing local ceramic industries based on them. It has also co-operated with countries such as Bangladesh in establishing plants manufacturing sheet glass and glass containers, and a number of countries in establishing both large and small projects for cement plants (Botswana), brickworks (Burkina Faso) and slate-works (Bhutan).

Table 4. Selected UNIDO technical co-operation projects: non-metal mineral products

Country or region	Period	Project title
Bangladesh	1983-	Assistance to glass factories
Bangladesh	1983-	Upgrading and development of indigenous building materials manufactures
Bhutan	1981-	Development of Bonsegeoma slate deposit
Burkina Faso	1983-	Rehabilitation of the brickworks VOLBRICERAM
Chad	1983-	Assistance á la relance de la production des matériaux de construction
Democratic Yemen	1983-	Assistance to heavy clay and ceramic industries
Ethiopia	1981-1986	Assistance to the marble and stone industry
Ethiopia	1985-1986	Assistance to Ethiopian Electricity, Light and Power Authority in ceramic technology
Gambia	1982-1986	Establishment of a small-scale brick-making plant
Guinea-Bissau	1985-	Etude pour l'établissement d'une cimenterie dans le Mayo-Kebbi
Haiti	1979-	Projet intégré de développement de la pierre
Malawi	1986-	Utilization of linthopic ceramic clays
Niger	1981-	Renforcement des activités de la briqueterie SONICERAM
Yemen	1985-	Assistance to the Amran Cement Company

E. Iron and steel (ISIC 371)

The largest number of UNIDO technical co-operation projects are executed in the iron and steel industry, covering technology for processing iron ore, basic steel manufacture, manufacture of a range of steel products and special steels and foundry operations. The following examples illustrate the wide range of UNIDO projects, including assistance in establishing new facilities (Lesotho), rehabilitation or modernization of existing plants (Afghanistan), and evaluation of raw materials for the iron and steel industry (Niger).

Table 5. Selected UNIDO technical co-operation projects: iron and steel

Country or region	Period	Project title
Afghanistan	1981-1986	Technical assistance for the rolling mill in Pul-i-Charki industrial areas
Benin	1985-	Etude de préfaisabilité pour l'installation d'une mini-aciérie
Democratic Yemen	1978-	Modernization of the foundry and associated mechanical workshop at the Revolution Workshop Foundry
Ethiopia	1984-	Technical assistance in electric arc-furnace steel-making
Guinea	1982-	Assistance au renforcement du Centre d'entretien et de réparation des équipements industriels
Lesotho	1986-	Mini-foundry casting facility
Mozambique	1984	Preparation of a detailed project design and execution programme for establishment of a network of metal production/processing units
Niger	1981-	Création d'une installation de fonderie et de forge pour la production et la démonstration
Niger	1985-	Technical investigations of the production of sponge iron for steel-making utilizing indigenous iron ores and coals
Sierra Leone	1983-	Technical assistance to the National Workshop
Somalia	1985-1986	Technical assistance in upgrading of production efficiency and local skill of the foundry mechanical workshop
Sudan	1986-	Assistance to Sudan Mint Foundry in improving the operation of induction melting furnaces
United Republic of Tanzania	1980-	Establishment of a Small Industries Development Organization foundry with integrated mechanical workshops

Annex II

UNIDO TECHNICAL CO-OPERATION DELIVERY TO THE LEAST DEVELOPED COUNTRIES

Table 6. Value of UNIDO technical co-operation projects in least developed countries
(United States dollars)

Country	1986	1987	1988	1989
Africa				
Benin	227 406	241 547	129 042	21 083
Botswana	191 881	470 929	481 936	452 834
Burkina Faso	452 783	401 272	435 912	691 869
Burundi	452 539	334 094	118 224	78 895
Cape Verde	274 757	414 587	305 586	280 578
Central African Republic	25 549	48 968	(3 907)	--
Chad	403 180	676 597	970 727	603 483
Comoros	108 252	595	--	--
Equatorial Guinea	27 531	(1 090)	--	--
Ethiopia	3 961 367	2 046 904	3 601 566	4 701 142
Gambia	35 512	112 609	57 945	38 030
Guinea	832 769	553 045	812 341	843 592
Guinea-Bissau	43 759	196 887	134 688	160 074
Lesotho	352 442	126 199	123 661	286 498
Malawi	183 762	141 392	585 202	1 193 322
Mali	834 777	885 685	441 590	384 940
Mauritania	-	35 995	23 156	149 390
Mozambique	-	-	-	903 043
Niger	379 849	424 099	640 074	705 887
Rwanda	321 167	579 759	92 281	462 210
Sao Tome and Principe	17 253	4 631	303 723	114 717
Sierra Leone	677 217	372 822	462 370	442 765
Togo	772 907	547 720	1 041 290	398 376
Uganda	344 877	620 786	716 969	941 064
United Republic of Tanzania	842 468	929 614	349 969	489 054
Americas				
Haiti	47 720	75 795	15 235	45 742
Arab countries				
Democratic Yemen	226 346	313 889	402 629	274 904
Djibouti	55 567	(9 725)	33 855	69 549
Somalia	780 125	538 597	751 110	715 002
Sudan	268 350	250 425	601 057	771 612
Yemen Arab Republic	104 549	125 127	942 295	844 284
Asia and Pacific				
Afghanistan	24 323	(589)	--	--
Bangladesh	1 976 819	1 660 439	1 135 263	2 411 802
Bhutan	389 967	360 054	189 059	148 528
Kiribati	-	19 134	(30)	62 832
Lao People's Democratic Republic	255 910	82 584	(584)	49 577

continued

Table 6 (continued)

Country	1986	1987	1938	1989
Maldives	30 879	116 195	5 827	(162)
Myanmar, Union of	-	-	-	566 284
Nepal	763 119	882 887	1 289 295	1 645 056
Samoa	-	-	-	17 508
Tuvalu	-	-	78 475	--
Vanuatu	-	214 078	24 442	56 216
Other projects in least developed countries	324 564	419 749	(55 589)	319 981
Total (all projects in least developed countries)	17 012 242	15 214 285	17 031 307	22 341 561

Note: Figures in parentheses indicate negative values.

Annex III

COMPOSITION OF UNIDO TECHNICAL CO-OPERATION a/

Table 7. Funding sources of UNIDO technical co-operation
(United States dollars)

Item	1986	1987	1988	1989
Regular Programme of Technical Co-operation	1 563 882	598 284	627 748	1 671 964
Indicative Planning Figure	12 580 256	10 587 253	13 480 605	14 167 162
Special Industrial Services	902 052	737 797	611 369	526 892
UNDP Special Measures for Least Developed Countries	--	284 999	26 402	154 922
Industrial Development Fund	717 795	2 380 463	851 456	2 937 967
Other sources b/	1 248 257	625 489	1 436 727	2 882 654
Total (all projects in least developed countries)	17 012 242	15 214 285	17 031 307	22 341 561

a/ Data for 1986 cover 37 least developed countries. Data for 1987 cover 40 least developed countries, with the addition of Kiribati, Mauritania and Tuvalu. Data for 1988 cover 41 countries, with the addition of Myanmar. Data for 1989 cover 42 countries, with the addition of Mozambique.

b/ Including trust funds, projects financed by the International Development Association, the Voluntary Fund of the United Nations Decade for Women, the United Nations Financing System for Science and Technology for Development, and the United Nations Fund for Drug Abuse Control.

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SECOND UNITED NATIONS CONFERENCE ON THE LEAST DEVELOPED COUNTRIES

Preparatory process for the Conference

UNDRO disaster mitigation activities in or for the benefit of the least developed countries

Contribution by the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) */

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UNDRO Disaster Mitigation Activities In or For the Benefit of the Least Developed Countries.

UNDRO carries out several different types of disaster mitigation activities either in ***Least Developed Countries (LDCs)*** themselves, or for the benefit of LDCs. These include:

- **Disaster management research projects**
- **National projects**
- **Regional, sub-regional, and international activities**
- **Symposia, seminars, and workshops**
- **Disaster management publications**

Typical examples of such current activities, or those carried out recently by UNDRO, follow:

1. UNDRO Disaster Management Research Projects.

"Preliminary Study on the Identification of Disaster-prone Countries Based on Economic Impact"

This research project, completed in January, 1990, was carried out primarily for the UNDP Governing Council, in connection with preparations for its 5th programming cycle. Several members of the Council had suggested that its calculations should include a supplementary consideration of whether or not a country is disaster-prone. At the request of UNDP/PCO, UNDRO undertook this preliminary study in order to determine whether it is feasible to develop such a quantitative measure of *disaster-proneness.*

The objective of the study was to attempt to devise a quantitative measure which will identify the degree to which a country is disaster-prone. Such a measure was to be based on objective, simple, universal criteria. Particular attention was paid in this study to ***Least Developed Countries (LDCs)*** (as well as to *Island Developing Countries (IDCs)*).

The result of the study was the development of such a measure, called a ***disaster-proneness index*** which although only preliminary, appears promising for UNDP's consideration in the 5th programming cycle. This will benefit LDCs by providing a basis for disaster mitigation efforts to be included in individual projects to be carried out in the development planning process for the benefit of those countries.

The index selected as a measure of disaster-proneness was the damage caused by the disaster as a percentage of its total annual Gross National Product (GNP). After empirical trials with several countries, a threshhold of 1% of total annual GNP was decided upon in order for a disaster to be considered a ***significant disaster***, and thus be included in the calculation of the index for a given country. This threshhold appears to be sufficient to include most disasters which can be considered to have had a major effect on the country in question.

An index was calculated for every such disaster which occurred during the approximately twenty-year period January, 1970 to July, 1989, for which sufficient information was available either to compute or to estimate such an index. The index was calculated for each disaster which occurred during the period in question which equalled or exceeded the established threshhold. A ***Total Index*** and an ***Average Index*** for each country were then computed as possible measures of its disaster-proneness.

The Total Index is the sum of the indices of each significant disaster which occurred in the country during the period studied. It thus measures the ***total effect over twenty years*** of damage suffered by that country, as a percentage of one year's total annual GNP.

The Average Index is the average of the indices of all significant disasters which occurred in the country during the period studied. It thus measures the effect of the ***average significant disaster*** which struck the country during the twenty-year period of the study, as a percentage of its total annual GNP.

Some 195 countries and territories were examined in the course of the study, including all forty-two defined by UNCTAD to be ***Least Developed Countries (LDCs)*** (as well as the fifty-one defined as *Island Developing Countries (IDCs)*). Of those, sufficient information was available, or could be estimated, to compute the total disaster-proneness index and the average disaster-proneness index for 133 of them, including twenty-nine of the LDCs (and thirty-three of the IDCs).

The results of the computations for the LDCs are summarized in the Tables on the following pages. (Copies of the complete study, including the results for ***all*** countries which were examined, can be obtained from UNDRO, Geneva.)

Table 1, *"Summary - LDC 'Disaster-Proneness' Index (1970-1989)"*, lists all forty-two LDCs examined, in simple alphabetical order, and shows, *inter alia*, the Total Index and Average Index for each such country. This Table also indicates those LDCs for which insufficient information was available either to compute or to estimate an Index.

Table 2, *"LDC Summary by Index"*, lists the LDCs in ***descending order of Index***, once by ***Total Index*** and once by ***Average Index***, for all those LDCs for which an Index could be computed or estimated. (Details on ***each*** *"significant"* disaster within each country, are included in the Annex to the complete report available from UNDRO.)

2. UNDRO National Disaster Mitigation Projects.

Table 3 lists some of the LDCs in which UNDRO has recently carried out, or continues to carry out disaster mitigation projects, including the names of the countries and descriptions of the projects.

3. UNDRO Regional, Sub-regional, Inter-regional, and International Disaster Mitigation Activities.

Table 4 lists some of the regional disaster mitigation projects which UNDRO has recently carried out, or continues to carry out, which either involve LDCs or are of benefit to LDCs. The Table includes the region and a description of the project.

4. UNDRO Symposia, Seminars, and Workshops in Disaster Management.

Table 5 lists some of the regional disaster management seminars and workshops which UNDRO has recently either organized, sponsored, or participated in. These seminars and workshops all included participants from LDCs, some of whom participated thanks to an UNDRO grant.

READEX FICHE

5. UNDRO Publications Dealing with Disaster Management.

Table 6 lists the kinds of publications produced by UNDRO which deal with disaster management and which are available and of benefit to LDCs in disaster mitigation programs in those countries.

TABLE 1: SUMMARY - LDC "DISASTER-PRONENESS" INDEX (1970-1989)

COUNTRY	POPULATION (1980)	GNP (1980) PER CAPITA	GNP (1980) TOTAL ($MIO)	SIGNIFICANT DAMAGE (1% GNP)	NO. OF EVENTS	INDEX TOTAL	INDEX AVERAGE
AFGHANISTAN	15,940,000	$ 170 (2)	$ 2,710	$ 27,100,000	6	27.10	4.52
BANGLADESH	88,513,000	$ 130	$ 11,030	$ 110,300,000	7+	50.32+	7.19-
BENIN	3,479,000	$ 290	$ 1,020	$ 10,200,000	2-	(1)	(1)
BHUTAN	1,273,000	$ 80	$ 100	$ 1,000,000	0+	(1)	(1)
BOTSWANA	901,000	$ 880	$ 800	$ 8,000,000	6	10.13	1.69
BURKINA FASO	6,161,000	$ 200	$ 1,250	$ 12,500,000	4	191.23	47.81
BURMA	33,313,000	$ 170	$ 5,630	$ 56,300,000	1+	1.71+	1.71-
BURUNDI	4,114,000	$ 210	$ 850	$ 8,500,000	1-	(1)	(1)
CAPE VERDE	295,000	$ 310	$ 90	$ 900,000	2	12.06	6.03
CENTRAL AFRICAN REP.	2,330,000	$ 310	$ 710	$ 7,100,000	1-	(1)	(1)
CHAD	4,455,000	$ 110	$ 490	$ 4,900,000	5+	92.04+	18.41-
COMOROS	347,000	$ 290	$ 100	$ 1,000,000	3	61.18	20.39
DJIBOUTI	352,000	$ 460	$ 160	$ 1,600,000	5+	9.82+	1.96-
EQUATORIAL GUINEA	341,000	$ 180 (1981)	$ 62 (1981)	$ 620,000	1-	(1)	(1)
ETHIOPIA	31,065,000	$ 130	$ 4,080	$ 40,800,000	7+	60.82+	8.69-
GAMBIA	574,000	$ 360	$ 210	$ 2,100,000	2	14.79	7.37
GUINEA	5,425,000	$ 280	$ 1,520	$ 15,200,000	1-	(1)	(1)
GUINEA BISSAU	773,000	$ 170	$ 130	$ 1,300,000	0	0.00	0.00
HAITI	5,009,000	$ 280	$ 1,420	$ 14,200,000	2+	9.21+	4.61-
KIRIBATI	59,000	$ 390	$ 20	$ 200,000	0	0.00	0.00
LAOS	3,426,000	$ 70	$ 240	$ 2,400,000	1+	17.98+	17.98-
LESOTHO	1,341,000	$ 470	$ 630	$ 6,300,000	3-	(1)	(1)
MALAWI	6,037,000	$ 190	$ 1,160	$ 11,600,000	1+	2.36+	2.36-
MALDIVES	152,000	$ 260	$ 39	390,000	0	0.00	0.00

TABLE 1: SUMMARY - LDC "DISASTER-PRONENESS" INDEX (1970-1989) (cont'd)

COUNTRY	POPULATION (1980)	GNP (1980) PER CAPITA	GNP (1980) TOTAL ($MIO)	SIGNIFICANT DAMAGE (1% GNP)	NO. OF EVENTS	INDEX TOTAL	INDEX AVERAGE
MALI	6,699,000	$ 180	$ 1,230	$ 12,300,000	3	22.52	7.51
MAURITANIA	1,523,000	$ 400	$ 600	$ 6,000,000	4	41.15	10.28
MOZAMBIQUE	12,084,000	$ 270	$ 3,262	$ 32,620,000	2+	2.65+	1.32-
NEPAL	14,640,000	$ 140	$ 2,040	$ 20,400,000	3	16.84	5.61
NIGER	5,532,000	$ 300	$ 1,670	$ 16,700,000	3+	21.53+	7.17-
RWANDA	5,168,000	$ 220	$ 1,150	$ 11,500,000	3-	(1)	(1)
SAMOA, WESTERN	156,000	$ 350	$ 54	$ 540,000	2-	(1)	(1)
SAO TOME & PRINCIPE	113,000	$ 380	$ 40	$ 400,000	1-	(1)	(1)
SIERRA LEONE	3,474,000	$ 300	$ 1,030	$ 10,300,000	0	0.00	0.00
SOMALIA	4,272,000	$ 260	$ 1,110	$ 11,100,000	9-	(1)	(1)
SUDAN	18,681,000	$ 360	$ 6,740	$ 67,400,000	1+	5.56+	5.56-
TANZANIA	18,534,000	$ 270	$ 4,890	$ 48,900,000	0	0.00	0.00
TOGO	2,578,000	$ 350	$ 900	$ 9,000,000	1-	(1)	(1)
TUVALU	8,000	$ 630	$ 5	$ 50,000	0	0.00	0.00
UGANDA	12,630,000	$ 200	$ 2,490	$ 24,900,000	6-	(1)	(1)
VANUATU	117,000	$ 380	$ 40	$ 400,000	4	228.41	57.74
YEMEN ARAB REP.	7,039,000	$ 430	$ 3,000	$ 30,000,000	1+	66.67+	66.67-
YEMEN, P.D. REP.	1,907,000	$ 420	$ 810	$ 8,100,000	4	29.05	7.26

KEY TO SYMBOLS APPEARING IN TABLE 1:

N.A. = INFORMATION NOT AVAILABLE
(1) = INSUFFICIENT INFORMATION AVAILABLE TO COMPUTE OR ESTIMATE INDEX
(2) = ESTIMATE
\+ = COULD BE HIGHER, DEPENDING ON MISSING INDEX INFORMATION
\- = COULD VARY, DEPENDING ON MISSING INDEX INFORMATION

TABLE 2 - LDC SUMMARY BY INDEX

DESCENDING ORDER BY TOTAL INDEX:		DESCENDING ORDER BY AVERAGE INDEX:	
1. VANUATU (4)	228.41	1. YEMEN ARAB REP. (1+)	66.67-
2. BURKINA FASO (4)	191.23	2. VANUATU (4)	57.74
3. CHAD (5+)	92.04+	3. BURKINA FASO (4)	47.81
4. YEMEN ARAB REP. (1+)	66.67+	4. COMOROS (3)	20.39
5. COMOROS (3)	61.18	5. CHAD (5+)	18.41-
6. ETHIOPIA (7+)	60.82+	6. LAOS (1+)	17.98-
7. BANGLADESH (7+)	50.32+	7. MAURITANIA (4)	10.28
8. MAURITANIA (4)	41.15	8. ETHIOPIA (7+)	8.69
9. YEMEN, P.D. REP. (4)	29.05	9. MALI (3)	7.51
10. AFGHANISTAN (6)	27.10	10. GAMBIA (2)	7.37
11. MALI (3)	22.52	11. YEMEN, P.D. REP. (4)	7.26
12. NIGER (3+)	21.53+	12. BANGLADESH (7+)	7.19-
13. LAOS (1+)	17.98+	13. NIGER (3+)	7.17-
14. NEPAL (3)	16.84	14. CAPE VERDE (2)	6.03
15. GAMBIA (2)	14.79	15. NEPAL (3)	5.61
16. CAPE VERDE (2)	12.06	16. SUDAN (1+)	5.56-
17. BOTSWANA (6)	10.13	17. HAITI (2+)	4.61-
18. DJIBOUTI (5+)	9.82+	18. AFGHANISTAN (6)	4.52
19. HAITI (2+)	9.21+	19. MALAWI (1+)	2.36-
20. SUDAN (1+)	5.56+	20. DJIBOUTI (5+)	1.96-
21. MOZAMBIQUE (2+)	2.65+	21. BURMA (1+)	1.71-
22. MALAWI (1+)	2.36+	22. BOTSWANA (6)	1.69
23. BURMA (1+)	1.71+	23. MOZAMBIQUE (2+)	1.32-

NOTES

1. THE FOLLOWING LDCS HAD NO SIGNIFICANT EVENTS DURING THE PERIOD 1970-1989, AND THEREFORE HAD A TOTAL INDEX = AVERAGE INDEX = 0.00 :

   GUINEA BISSAU, KIRIBATI, MALDIVES, SIERRA LEONE, TANZANIA, AND TUVALU

2. FOLLOWING ARE THE LDCS EXAMINED IN THE STUDY FOR WHICH INSUFFICIENT INFORMATION WAS AVAIALBLE EITHER TO COMPUTE OR TO ESTIMATE AN INDEX:

   BENIN, BHUTAN, BURUNDI, CENTRAL AFRICAN REP., EQUATORIAL GUINEA, GUINEA, LESOTHO, RWANDA, WESTERN SAMOA, SAO TOME & PRINCIPE, SOMALIA, TOGO, UGANDA.

KEY TO SYMBOLS USED IN TABLE 2

\+ = COULD BE HIGHER, DEPENDING ON MISSING INFORMATION ON INDIVIDUAL DISASTERS
\- = COULD VARY, DEPENDING ON MISSING INFORMATION ON INDIVIDUAL DISASTERS
(n) = NUMBER OF SIGNIFICANT EVENTS WHICH OCCURRED DURING THE PERIOD 1970-1989

TABLE 3: UNDRO NATIONAL DISASTER MITIGATION PROJECTS IN OR FOR THE BENEFIT OF LDCS

COUNTRY	PROJECT TITLE / DESCRIPTION	DATES START	DATES END
AFGHANISTAN:	1. Seismic hazard assessment and forecasting.	1985	1985
	2. Programme support to Office of Emergency Preparedness.	1/90	2/90
BANGLADESH:	Flood Prevention Project. Elaboration of a comprehensive five-year program in disaster preparedness. (Details included in Secretary-General's Report.)	1989	1994
CHAD:	Strengthening of Relief Co-ordination and Information Centre for Emergencies through installation of computer system.	1985	1985
DJIBOUTI:	Update the Djibouti disaster management plan, review additional human resources, equipment, and coordination mechanisms required to facilitate its effective implementation.	1989	1989
GUINEA:	Emergency component of National Reconstruction Programme.	1985	1985
HAITI:	1. Disaster mitigation project.	1987	1987
	2. Assist National Pre-disaster Planning and Relief Office to develop its capacity in disaster preparedness.	1989	1989
	3. Disaster preparedness and prevention project.	1990	1992
MALDIVES:	Review preparedness and prevention measures in connection with coastal flooding. (Details included in Secretary-General's Report.)	1988	1988
MALI:	National disaster preparedness and prevention planning	1985	1985
MOZAMBIQUE:	Strengthening national disaster prevention and counter-disaster operations. Advice on assessment of vulnerability to floods and drought, formulation of disaster prevention and preparedness plans, organization of disaster management units, definition of responsibilities, operational planning and in-service training, and related matters.	1984	1984
NEPAL:	1. National disaster preparedness and prevention planning	1985	1985
	2. Institutional Support to Disaster Preparedness and Relief Plan. Assist the Ministry of Home, and the Special Disaster Unit of the Ministry, in the development of their National Disaster Preparedness Plan. Arrange for training of staff of Unit and organize in-country training seminars. An emergency Control Centre has been developed to improve communication and coordination mechanisms in times of crisis.	5/87	12/90
NIGER:	Disaster mitigation project.	1987	1987
SUDAN:	Establishment of disaster management center. Specify, acquire computer equipment, develop software, install system and train staff.	1985	1986
VANUATU:	Inter-agency mission, followed by project on improvements in national disaster preparedness structure.	1984	1985

TABLE 4: UNDRO REGIONAL, SUB-REGIONAL, AND INTERNATIONAL DISASTER MITIGATION ACTIVITIES

REGION	PROJECT TITLE / DESCRIPTION	--- DATES -- START	END
AFRICA:	Regional meeting on Disaster Prevention and Preparedness in Africa. Measures to mitigate harmful impact of disasters other than drought on economic and social development. (Several LDC participants.)	1984	1984
AFRICA (WEST AND CENTRAL):	Participation in "The Institution and Co-ordination of National Contingency Plans for Emergencies Associated with Industrial Installations in the West and Central African Region", and in regional workshop on this subject. (Several LDCs involved.)	1984	1984
ASIA:	Administrative Staff College of India. Collaboration in training and research activities in disaster management, both in curriculum development and sponsorship of regional participants in their training courses. (Benefits LDCs.)	1977	--
ASIA:	Asian Disaster Preparedness Centre (ADPC). The Centre was created as an UNDRO collaborating centre as part of the Asian Institute of Technology in Bangkok. It is a regional training centre in disaster management and receives ongoing support from UNDRO. (Benefits both LDCs and IDCs.)	1986	--
CARIBBEAN:	Pan-Caribbean Disaster Preparedness and Prevention Project. Multi-agency project covering 29 island countries and territories in the Caribbean, for disaster prevention, preparedness, and communication.	9/81	12/90
	(Participating countries include mostly IDCs, some of which are also LDCs)		
EUROPE:	Pisa Emergency Relief Goods Stockpile. Creation, expansion of UNDRO warehouse to pre-position stockpiles of emergency relief goods in the United Nations Supply Depot in Pisa, Italy. (Benefits both LDCs and IDCs.)	1984	--
INTER-AGENCY:	Panel on Tropical Cyclones. Develops disaster prevention and preparedness projects, including workshops and seminars, on tropical cyclones. (Benefits both LDCs and IDCs.)	1974	--
	Regional Seminar on Disaster Preparedness.	1984	1984
INTER-AGENCY:	United Nations Industrial Development Organization (UNIDO). Collaboration in studies to reduce hazards created by industrial activities. (Benefits LDCs.)	1985	1985
INTER-AGENCY:	United Nations Environment Programme (UNEP). Joint UNEP/UNDRO production of "Compendium on Disaster Prevention and Mitigation" ("Preparedness Aspects" published 1984). (Benefits both LDCs and IDCs.)	1984	--
	Collaboration in studies on reducing the effects on the environment which result from major accidents. (Benefits both LDCs and IDCs.)	1985	1985
INTER-GOVERNMENTAL:	Typhoon Committee. An inter-governmental organization to reduce the effects of typhoons through improved forecasting of typhoons and floods, and disaster prevention and preparedness. (Benefits both LDCs and IDCs.)	1968	--

TABLE 4: UNDRO REGIONAL, SUB-REGIONAL, AND INTERNATIONAL DISASTER MITIGATION ACTIVITIES (cont'd)

REGION	PROJECT TITLE / DESCRIPTION	--- DATES --- START	END
INTER-GOVERNMENTAL:	TOPEX (Typhoon Operational Experiment). Participation in Warning Dissemination and Information Exchange component of TOPEX, a project of the Typhoon Committee. (Benefits both LDCs and IDCs.)	1981	1984
INTERNATIONAL:	International Programme for the Protection of Urban Centres from Earthquakes. Programme to train and inform specialists and the public on measures to reduce earthquake losses in densely-built urban areas constituting homogeneous or continuous structural systems. (Benefits LDCs and IDCs).	1984	--
	International seminar on post-earthquake measures for structural engineering and physical planning.	1985	1985
INTERNATIONAL:	Draft Convention on Removal of Legal Obstacles to the Delivery of Emergency Relief Supplies. Proposed convention to expedite the delivery of relief supplies, submitted to Thirty-Ninth Session of General Assembly. Revisions in progress. (Benefits LDCs and IDCs.)	1984	--
INTERNATIONAL:	International Decade for Natural Disaster Reduction. To provide a framework for national and international projects on disaster mitigation. Participation in preparations for the Decade, including the temporary Secretariat and acting as the United Nations focal point for Decade activities. (Benefits LDCs and IDCs.)	1987	--
SOUTHERN AFRICA:	Strengthening of disaster preparedness. (Includes Lesotho, Malawi - both LDCs - and Zimbabwe)	8/90	7/92
SOUTHERN ASIA:	Disaster Management Training Programme for South Asian Countries. Financing of participation of disaster relief officials from several countries, including LDCs.	1983	1986
SOUTH PACIFIC:	Disaster Preparedness and Prevention Programme. (Includes mostly IDCs; some are also LDCs)	3/90	2/92
SOUTHWEST INDIAN OCEAN:	Tropical Cyclone Committee for the Southwest Indian Ocean. Regional body (eight countries) to reinforce national capabilities in regional cooperation in forecasting tropical cyclones and in the dissemination of warnings. (Benefits both LDCs and IDCs.)	1984	1984
	Training seminar in disaster prevention and preparedness.	1984	1984

TABLE 5: UNDRO DISASTER MITIGATION SYMPOSIA/SEMINARS/WORKSHOPS

(Not mentioned elsewhere under specific projects)

REGION	PROJECT TITLE / DESCRIPTION	DATE
EUROPE:	Ibero-Maghrebian Seismic Project. Seminar series of Ibero-Maghrebian Working Group of the European Seismological Commission to promote and co-ordinate research on the seismic characteristics of the area and on the reduction of losses from earthquakes in the region.	1983
INTER-REGIONAL:	Seminar Series on Earthquake Mitigation. Inter-regional series of seminars for developing countries, held in the USSR, on earthquake risk reduction and disaster management. (Participants include representatives of several LDCs.)	1986
	1. Seminar on Assessment of Earthquake Risks.	10/86
	2. Seminar on Engineering Aspects of Earthquake Risk Mitigation.	10/88
	3. Earthquake Disaster Management Project/Seminar.	10/89
	4. Assessment of Geological and Geophysical Hazards Project/Seminar.	10/90
PACIFIC:	Workshop on Post-disaster Evaluation for the Pacific Islands. (Benefits both LDCs and IDCs.)	1985

TABLE 6: OTHER UNDRO ACTIVITIES BENEFITTING LDCS - UNDRO PUBLICATIONS

(Not mentioned elsewhere under specific projects)

PUBLICATION/SERIES	DESCRIPTION
COMPENDIUM:	"Compendium on Disaster Prevention and Mitigation. UNDRO/UNEP Compendium of Current Knowledge". Twelve volumes.
GUIDELINES:	"Guidelines for Disaster Prevention". Seven volumes.
TECHNICAL REPORTS:	Series of technical monographs, manuals, reports, bulletins, etc., on new technological developments in disaster management, computerized data bases of disaster management information, the use of satellites in disaster situations including emergency communications, etc. Nineteen such documents currently in print.
"UNDRO NEWS":	Bi-monthly publication containing articles on disaster prevention technology, pre-disaster planning, public education, assessment of relief needs, etc.
OTHER:	Other documents, brochures, etc., dealing with UNDRO and its functions. Sixteen such documents currently in print.
FILMS:	Production of a series of video films for use in disaster preparedness and prevention.